UT ENERGY WEEK 2015

A FIVE DAY CONFERENCE ON ENERGY TECHNOLOGY AND POLICY ISSUES, WITH TOURS, DEMOS, TRAINING COURSES, COMPETITIONS AND OTHER ENERGY-RELATED ACTIVITIES

FEBRUARY 16-20, 2015
Longhorn Energy Club

- Connects students from different disciplines
- Undergraduate and graduate
- Promotes
  - Research
  - Entrepreneurship
  - Professional Development
Longhorn Energy Promotes Student Research
Longhorn Energy Promotes Entrepreneurship
Longhorn Energy Promotes Professional Development
Longhorn Energy Volunteers Represent Eight UT Colleges and Schools

- Cockrell School of Engineering: 77 Graduates
- College of Communication: 1
- College of Natural Sciences: 11 Undergraduates
- Jackson School of Geosciences: 8 Dual Degrees
- LBJ School of Public Affairs: 0
- McCombs School of Business: 0
- UT School of Architecture: 0
- UT School of Law: 0

Students in Longhorn Energy: 0-40
Longhorn Energy Volunteers Represent Fourteen Disciplines

- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Energy and Earth Resources
- Environmental & Water Resource Engineering
- Global Policy Studies
- JD
- Journalism
- MBA
- Mechanical Engineering
- Petroleum Engineering
- Physics
- Public Affairs
- Sustainable Design/CRP

Students in Longhorn Energy
Longhorn Energy Volunteers Have Experience in the Energy Industry

Akca Energy
Anadarko
Apache
Austin Chamber of Commerce
Austin Energy
Booz & Company (now Strategy&)
Centerpoint Energy
Centro Mario Molina
Chesapeake Energy
Chevron
CleanEdison
CleanTX
CODA Automotive (now CODA Energy)
Conoco
Delaware Department of Natural Resources and Environmental Control
Dow Chemical

Energy Alternatives India
Exxon
Kiewit Energy
Mitsubishi Heavy Industries America
Peru LNG
Petro tech Peruana
Shell
Solar Energy Industries Association
Statoil
Suncor Energy
Syncrude Canada
Tata Steel Ltd.
Texas Commission on Environmental Quality
Texas House of Representatives
Texas Railroad Commission
U.S. Department of Energy
Longhorn Energy Alumni – Where are they now?

<table>
<thead>
<tr>
<th>Riveron Consulting</th>
<th>Schweitzer Engineering Laboratories</th>
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<tbody>
<tr>
<td>ClearResult</td>
<td>Gerson Lehrman Group</td>
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<td>Moody's Investors Service</td>
<td>Calpine</td>
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<td>Texas Health &amp; Human Services Commission</td>
<td>ExxonMobil</td>
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<td>Opower</td>
<td>IHS - CERA</td>
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<td>Stanford PhD Program</td>
<td>Lionakis</td>
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<td>GE Digital Energy</td>
<td>KPMG</td>
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<td>Robert W. Baird &amp; Co</td>
<td>Montague DeRose and Associates</td>
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<td>World Bank</td>
<td>Department of Energy</td>
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**Longhorn Energy Volunteers**

**Conduct Research**

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<thead>
<tr>
<th>Battery storage</th>
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<td>Water-energy nexus</td>
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Thank you to Longhorn Energy Officers and Volunteers
Thank you to our Sponsors
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The Energy Institute fosters interdisciplinary interactions among colleges and schools across campus, while serving as a portal for external audiences interested in learning more about energy research carried out at The University of Texas at Austin. The Institute leverages the expertise of faculty to study critical energy policy questions, and is dedicated to broadening the educational experience of students by creating a community of scholars around energy issues of importance to Texas, the nation and the world.

The activities of the Energy Institute are organized around four pillars:

POLICY
EDUCATION
RESEARCH
COMMERCIALIZATION
UT Energy Research Covers Many Areas

Research Funding (Millions)

- Carbon Management
- Energy Systems
- Energy Conversion and Storage
- Energy End-use and Distribution
- Environmental Impacts
- Fossil
- Nuclear
- Policy, Economics, and Outreach
- Renewable

UT Energy Funding Promotes LEC Student Research

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Chemical Engineering
Petroleum Engineering
Electrical and Computer Engineering
Mechanical Engineering
Chemistry
Civil Engineering
Computer Science
Energy Systems
Environmental and Water Resources Engineering
MBA
Petroleum & Geosystems Engineering
Sustainable Design, Community and Regional Planning
UT Energy Funding Promotes Energy Week Student Research

Maximizing Efficiency of the Electric Grid through Optimal Management of Thermal Energy Storage in Buildings

Energy Performance Improvement of Industrial H2 Plants through Smart Manufacturing

Model-Based Energy Management of High-Temperature Materials Processing

Back to the micro: how reversible, stable cycling is achieved in commercially viable, high energy density micro-sized Ge-particles infused with a sub-stoichiometric ratio of Se

Novel piperazine-based amine solvents for CO2 capture

Absorber Performance with High CO2

Assessing Environmental Sustainability of Novel Carbon nanotube-Titania-Platinum Nano-Hybrid Fuel Cell Electro catalysts

Analysis of Energy Use and CO2 Emissions in Petroleum Production

Mapping Energy Access

Development of a Multi-Objective Optimisation Tool for Selecting Thermal Insulation Materials in Sustainable Designs

Accessing Stranded Gas: Controlling Internally Gas-To-Liquids Processes

Efficient Hydrocarbon Exploitation from Quasi-Brittle Shale Formations through Optimal Hydraulic Fracturing

Utilizing Surface Treated Nanoparticles for Improved Geologic Carbon Sequestration

Inverse source problems for enhanced oil recovery by maximisation of wave motion in reservoirs

Modeling Profile Control of Preformed Particle Gel for Enhanced Oil Recovery after Polymer Flooding

Investigation of Effect of Temperature on Wax Deposition in Flow Loop

An Efficient Semi-Analytical Model for Simulation of Gas Flow in Shale Reservoirs with Complex Hydraulic Fractures

Residential Microgrid Planning and Control: The Lochem Case Study

TacTex’13: A Champion Adaptive Power Trading Agent

Analysis of Distribution System Faults using Intelligent Electronic Device Data

Polymer/Fullerene Bicontinuous Microemulsions for Use as Organic Solar Cell Active Layers

Integrated Optical Nanostructures for Omnidirectional, Broad-spectrum Improvement of Photos oils: Performance for III/V Solar Cells
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